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From The Child's Point Of View

An Evaluation of Outdoor Spaces in Neilson Creek Housing Cooperative

Research Report

July 1983

Canada

Canada Mortgage and Housing Corporation, the Federal Government's housing agency, is responsible for administering the National Housing Act.

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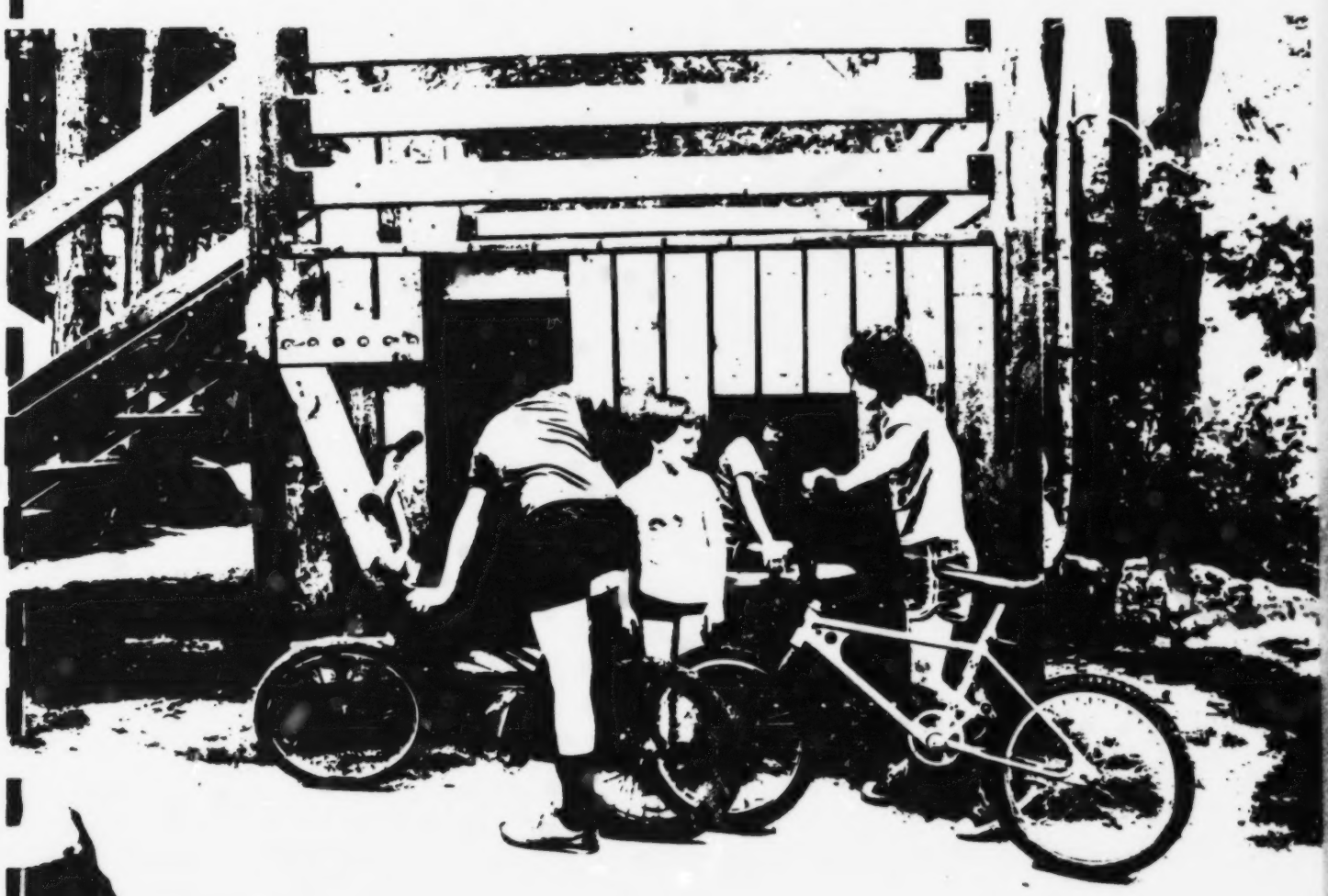

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An Evaluation of Outdoor Spaces in Neilson Creek Housing Cooperative

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Prepared for
Children's Environments Advisory Service
Canada Mortgage and Housing Corporation

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Photographs by Suzi Shack

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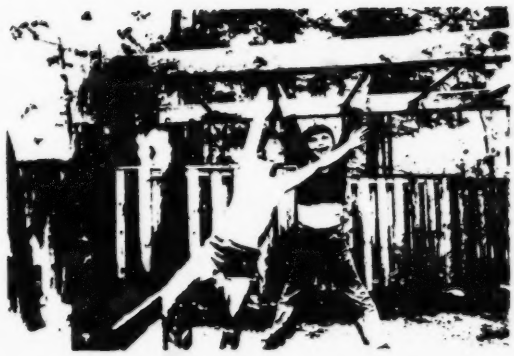
Preface

This book is based on an assessment of a small-scale CMHC demonstration project at the Neilson Creek Housing Cooperative in Scarborough, Ontario. The intention of the project was to apply CMHC guidelines for preschool and school-age play and many good design concepts that appear in CMHC research publications. The play areas of Neilson Creek Co-op integrate many of these design principles in one place as a unique illustration of how to improve the quality of the family environment in any housing project.



The setting chosen was a suburban medium-density townhouse project in south-east Metropolitan Toronto, on a compact site with a naturally wooded ravine and creek. It was planned as a project of 104 units, developed as a housing cooperative in which member residents each rented townhouse units and participated in running the community.

An expert from Children's Environments of CMHC met with new members of the housing co-op and, together with the project's consultants, participated in planning play areas for children throughout the site. A budget of $20,000.00 (1981) was established for play areas in addition to landscaping costs. A Recreation Committee, including children of different ages, was elected from residents, to suggest ideas and review plans and

details. After installation, the play areas were evaluated by the Recreation Committee and changes were made as required.

After a year of residents' living in the Neilson Creek Co-op, CMHC decided to carry out a detailed evaluation of the play areas and the overall use of the site from the point of view of children of all ages, their parents and other adults. This evaluation has revealed a very successful housing community with a great sense of pride in and care for its total housing environment. The Neilson Creek Co-op residents continue to participate in creating and maintaining a secure family and child-care setting, rich in opportunities for play and exploration, that can support good child development and cultivate a sense of responsibility on the part of children and adults.

The project is extremely well kept, it is free of vandalism and damage, and has an air of relaxed socializing and child care. Children are active and busy and free to move about with little restriction. The streets of the co-op are safe and drivers move with understood caution.

This is not only the result of a well organized housing cooperative, but also of a well-planned, stimulating environment where the hierarchies of territory from private to public are clearly defined. The availability of a natural ravine is a great asset in providing a place where older children can be explorative and exuberant in acting out their fantasies.

The evaluation was carried out during August and September of 1982. Overall use of all outdoor spaces, both public and private, was observed during mornings, afternoons and evenings over a period of five weeks. As well, each play area was observed at different times to see how children of different ages used play structures. Children, parents, management and maintenance people were interviewed on site to assess the success of Neilson Creek. Professional participants - the developers and landscape architects - were also interviewed to reveal intentions for children's play and child care.

Evaluation of Play Areas in Neilson Creek

Typical Cul-de-Sac

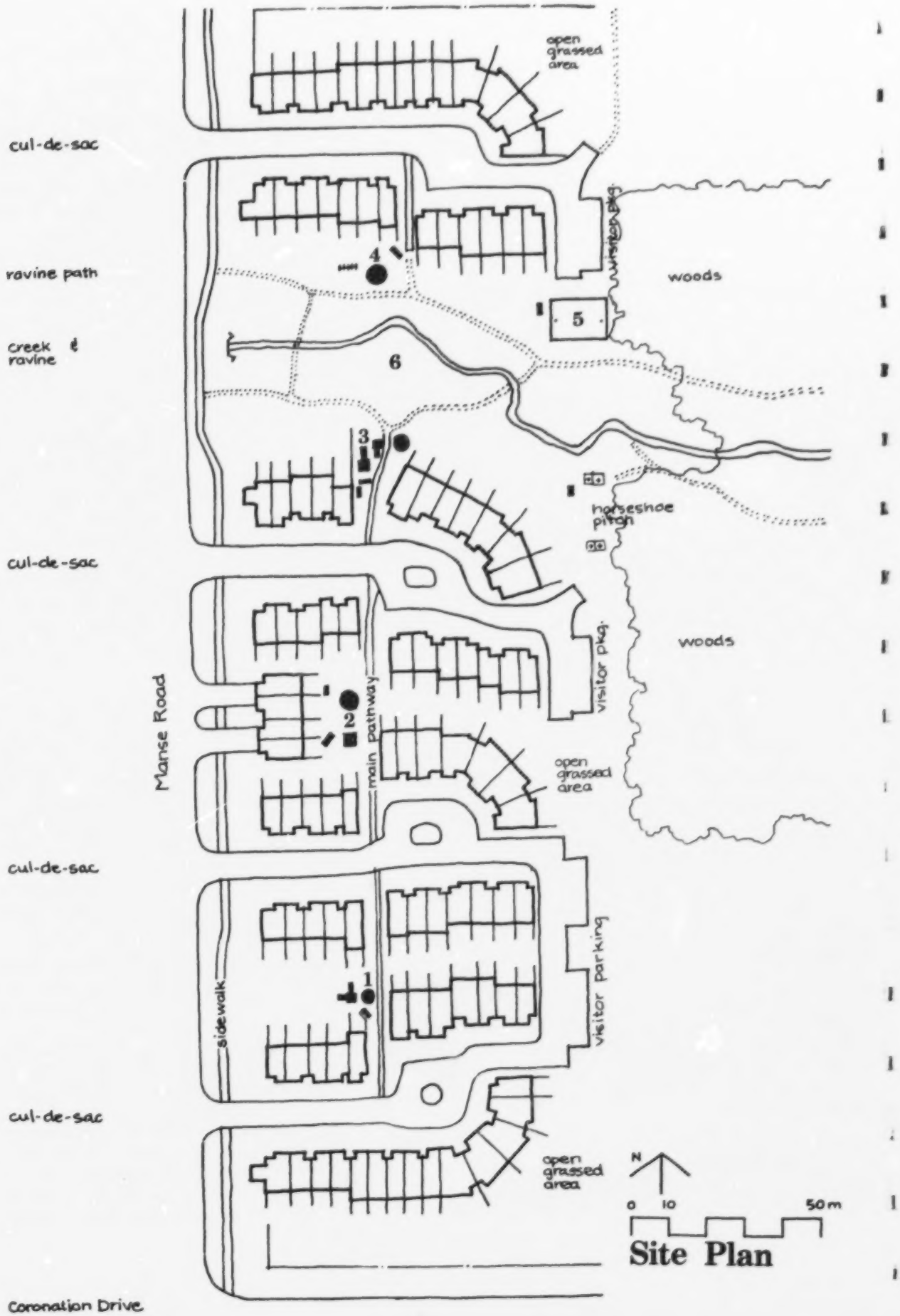
At end of culs-de-sac are located small visitor parking areas.

Site Context

Neilson Creek Housing Co-op is situated on 2.9 hectares. A small creek, for which the co-op was named, winds through the property dividing it with a ravine. The co-op has 104 townhouses organized into four mini-communities along four private culs-de-sac. The culs-de-sac are entered off a through street, Manse Road. Across Manse Road are junior and senior public elementary schools and a community centre with good amenities - parks, tennis courts, playing fields, a hockey arena and an outdoor pool.

The culs-de-sac end in visitor parking areas bounded by open grass areas with fields and wooded areas beyond the site. The combination of ravine, creek and wooded areas provides the older children with abundant open space to explore and structure their own imaginative world right next to their homes.

Within the project are five play areas, four of them have play structures and sandboxes and one, a basketball volleyball court. A central paved pathway cuts across the culs-de-sac and links the first three play areas. A footbridge across the ravine would connect the fourth play area, but this has yet to be built. Next to the main play area, a house has been taken


open grassed area
cul-de-sac
visitor pkg.
ravine path
woods
4
creek & ravine
5
6
3
horseshoe pitch
cul-de-sac
visitor pkg.
woods
Manse Road
main pathway
2
1
open grassed area
cul-de-sac
sidewalk
visitor parking
cul-de-sac
open grassed area
N
0 10 50m
Site Plan
Coronation Drive

over as a recreation centre; it contains the co-op office, laundry facilities and rooms for meetings and social events.

Play Areas and Ravine

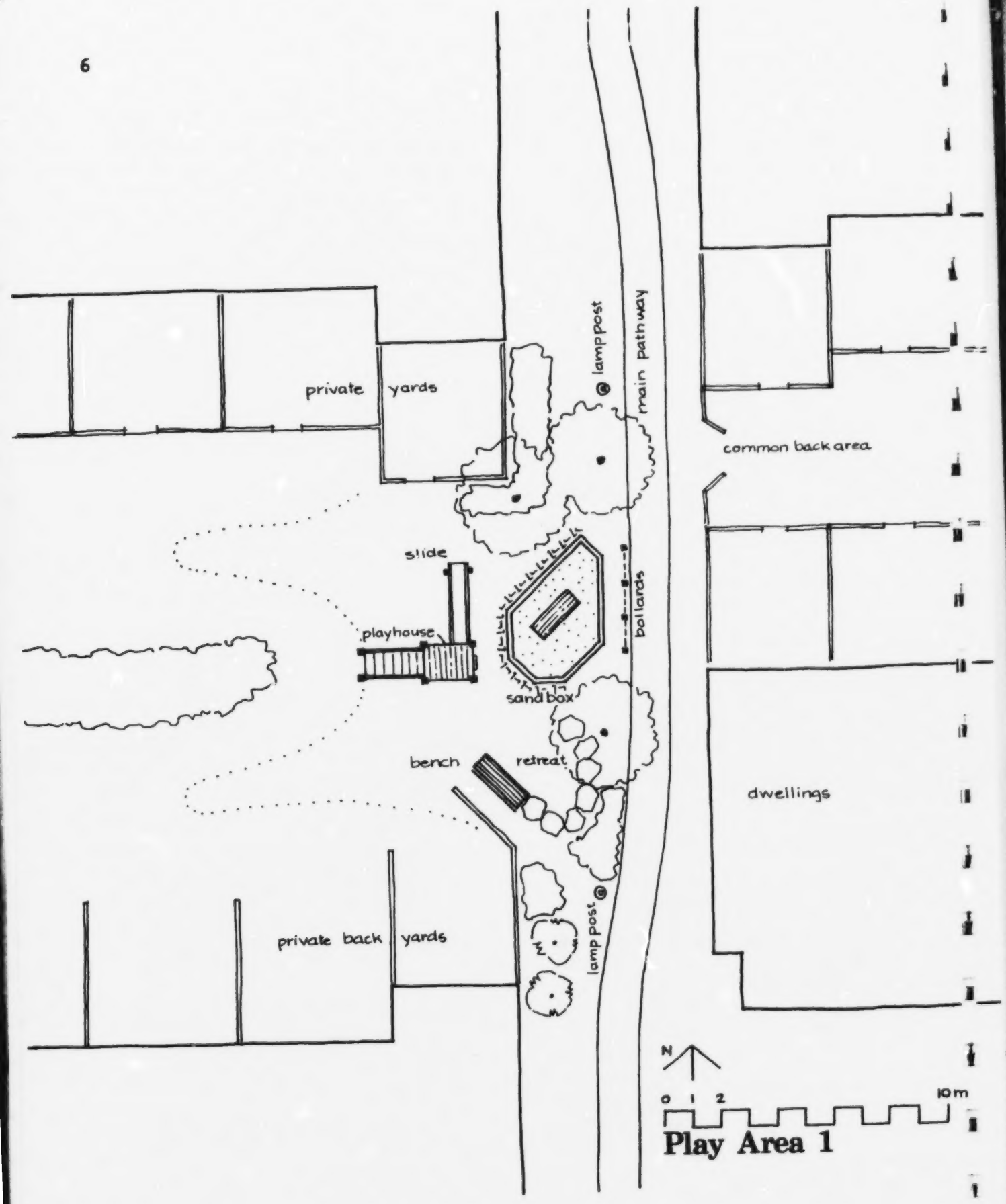
Based on CMHC guidelines, "Play Spaces for Preschoolers," there are a number of small play areas dispersed through the site, ranging from 110 m^2 to 360 m^2, so that young children have safe access to play within sight and sound of home. According to the CMHC document "Play Opportunities for School-Age Children", facilities have been organized for different age groups so that older play is separated or buffered from preschool areas.

Play Areas 1, 2, and 4 are oriented specifically to pre-school and young school-age children. They are located within 50 m of the dwellings, in the common shared space behind back yards. Sandboxes are set up as the key focus of activity in each play area, and these sand areas are located to be most visible to the maximum number of dwellings. The main living spaces are on the second level of the dwellings so that residents can easily see streets and common back spaces.

Each of the three preschool play areas has some different features to make it attractive to children beyond the immediate dwellings. Play Area 1 has a playhouse with slide. Play Area 2 has a jungle gym structure and slide built into a rocky mound. Play Area 4 on the other side of the ravine has a set of toddler swings.

The main Play Area, 3, has a more challenging climbing structure for school-age and young teenage children. It too has a sandbox and playhouse for younger children because it is meant to be a central gathering place for all ages. The last play area, Area 5 is a paved basketball/volleyball court with two permanent baskets in place and posts for a volleyball net. It is the only facility specifically oriented to teenagers. In addition it provides a large paved surface for school-age children's "street-games" to discourage them from playing on roadways and parking areas.

The ravine area with its creek is referred to as Play Area 6. It has been maintained as a natural landscape that children can use for explorative, physical and creative play. No play structures were thought necessary.


private yards
lamp post
main pathway
common back area
slide
playhouse
bollards
sand box
bench
retreat
dwellings
private back yards
lamp post
N
0 1 2 10m

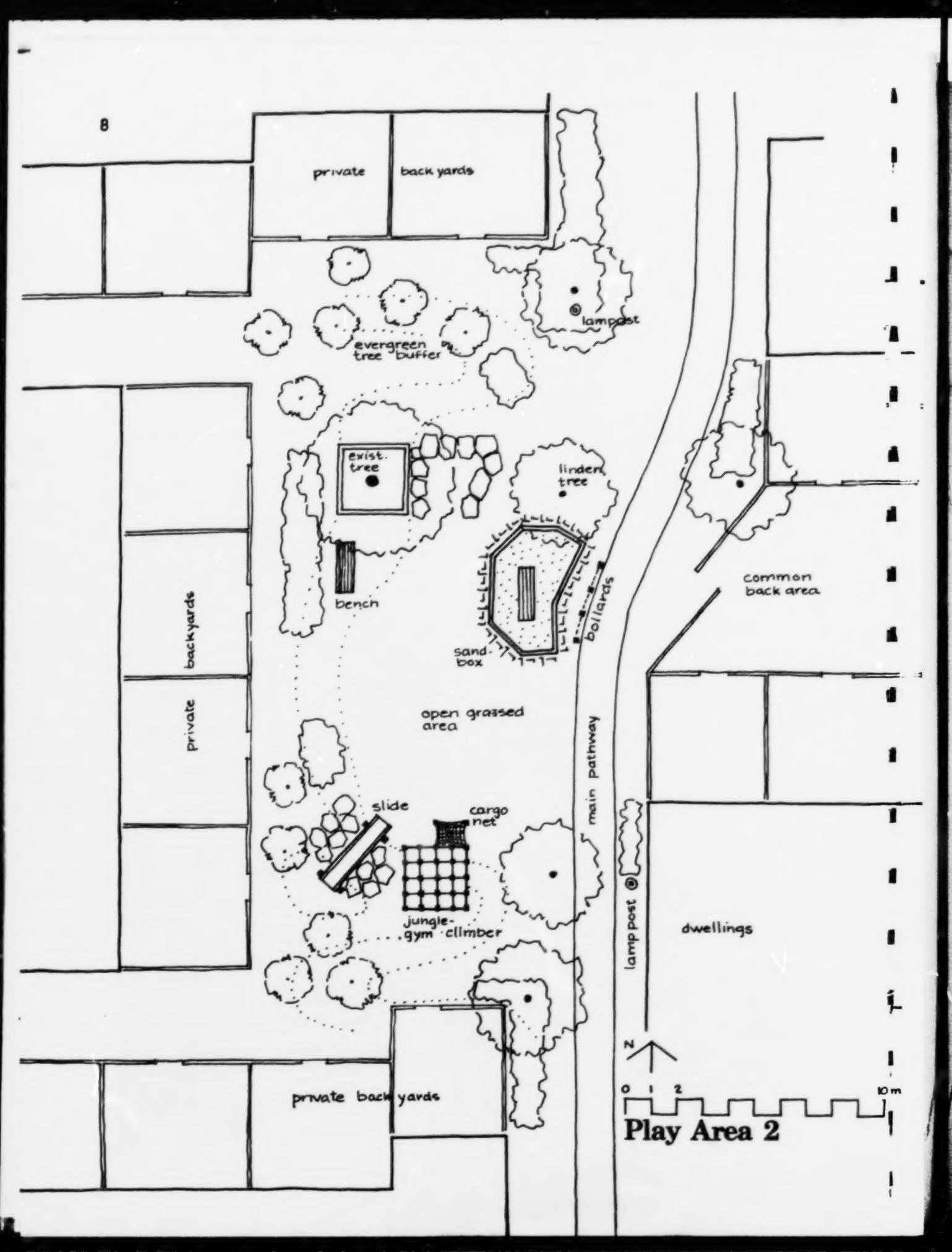
Play Area 1

Play Area 1

This is a small local play area (110 m^2) for preschool and young school-age children. It is located in a backyard common area along the main pedestrian path. This play space provides for physical, social and creative play with a sandbox and playhouse combined with stairs and slide. Adult seating is provided, adjacent to a small quiet retreat area.

The evaluation of Play Area 1 noted that the sandbox in this space was the centre of preschool children activity of Neilson Creek. The sandbox was ideally located so as to be overlooked from all backyard windows and viewed along the pathway to culs-de-sac. The sandbox works as the focus of play, located next to the path, but is buffered with bollards and chains from path activity. The playhouse, being close enough to the sandbox, (1.5 m apart) encourages spontaneous linked play between the two areas.

Some suggestions emerge from site observations of this play area. In this narrow space between backyards, the slide and stairs of the playhouse should be oriented away from backyards. Backyards should be fenced, protected with bushes and their fence gates should not be directly opposite active play spots. The rock-wall retreat should be at least 0.6 m high to create a sense of enclosure. The bench should be oriented to and closer to the path to create a social place for either adults or children.


private
back yards
lamppost
evergreen tree buffer
exist. tree
linden tree
bench
sand box
bollards
common back area
backyards
private
open grassed area
main pathway
slide
cargo net
jungle-gym climber
lamp post
dwellings
private back yards
N
0 1 2 10 m

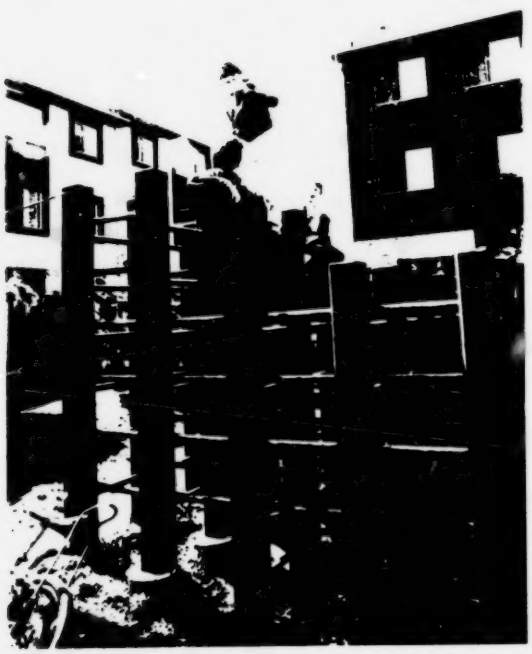
Play Area 2

Play Area 2

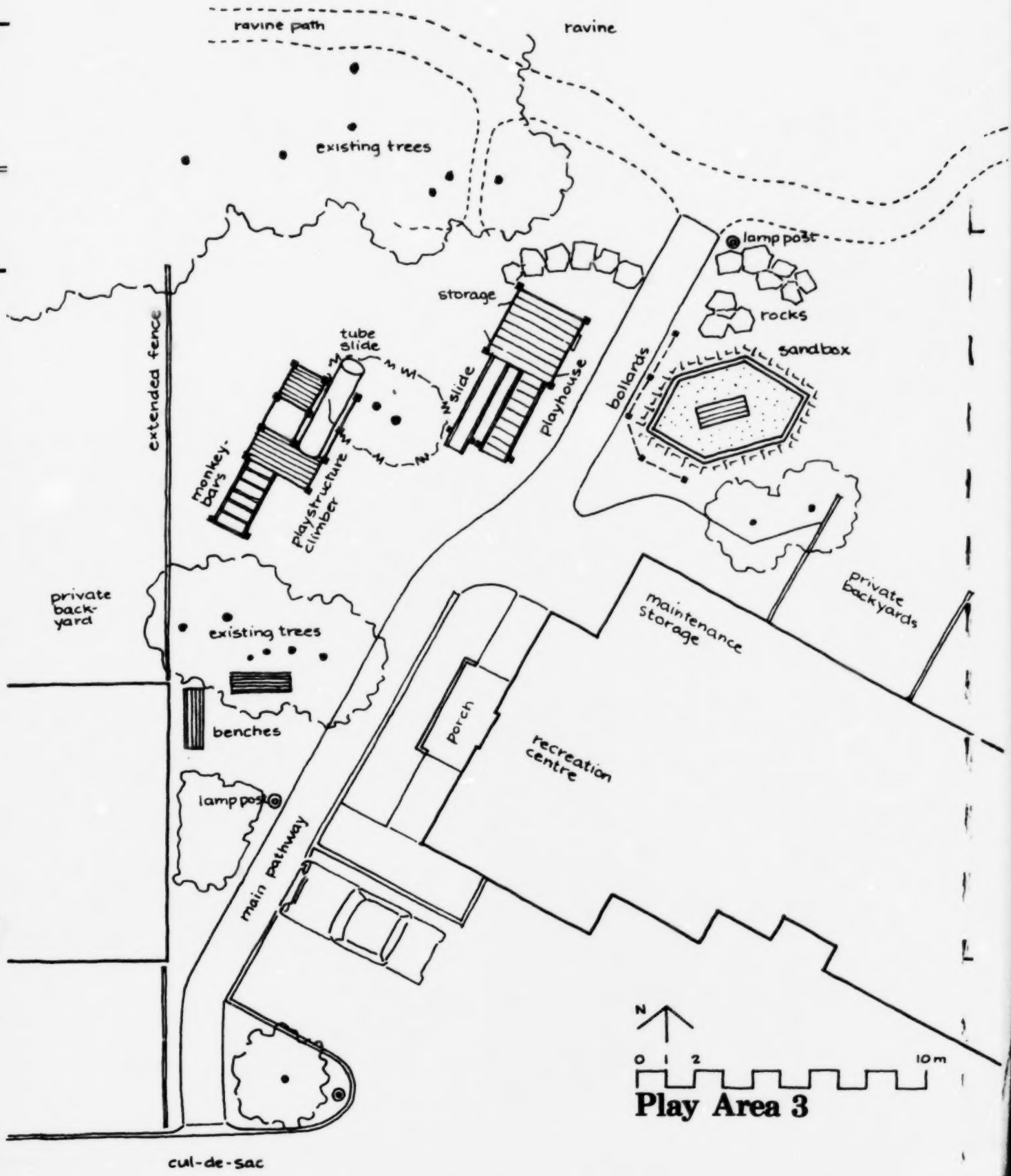
Jungle-gym is favourite perching place

This is a medium size local play area (360 m^2) for preschool and young school-age children. It is in a courtyard surrounded by backyards, and next to the main pedestrian path. A variety of play experiences in physical, social, creative and quiet retreat activities are provided with sandbox, jungle-gym climber, slide set on a rocky slope, rock-walled retreat and bench. The grass area in the centre separates the active climber and slide from the social creative activity of the sandbox and retreat areas.

The evaluation of Play Area 2 indicated that the focus of attention for all ages was the jungle-gym climber. This is the unique feature that distinguishes this play area from the others. The climber is well designed with wood posts and dowels so that it is not forbidding to touch in colder weather. It is close to the slide (2 m apart) so that there is linked activity between the climber and slide. The slide is ideally set into a slope with large rocks to clamber on beside the slide.



Similar critical observations, as noted in Play Area 1, apply to the rock-walled retreat and location of the bench. Although the sand area is not used as much as in Play Area 1, the same care is taken in its visible location. In general, Play Area 2 is well buffered with mounds and bushes from private backyards.


ravine path
ravine
existing trees
lamp post
storage
rocks
tube slide
N slide
sandbox
bollards
playhouse
extended fence
monkey-bars
playstructure climber
private back-yard
existing trees
private backyards
maintenance storage
porch
recreation centre
benches
lamp post
main pathway
N
0 1 2 10m
Play Area 3
cul-de-sac

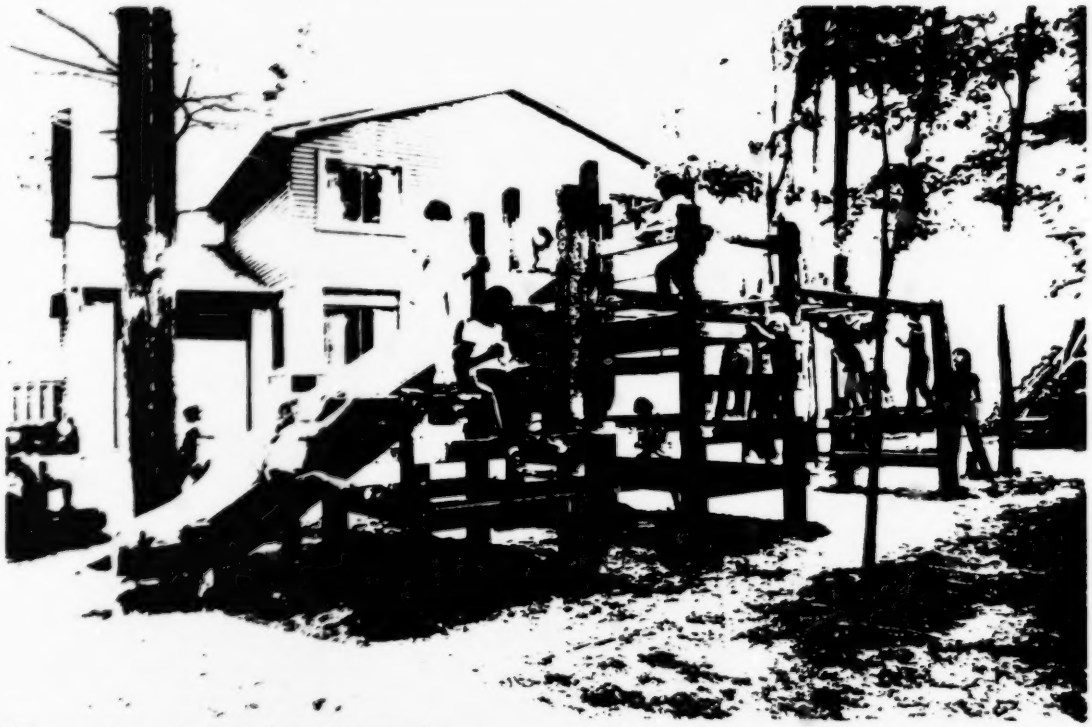
Play Area 3

This is the central play area and meeting place for school-age and younger teenage children. Part of this space is also usable by preschool children. It is a medium size area (350 m²) located between the side of one dwelling and the front of the co-op recreation centre, with the main pedestrian path going through the centre of it. Play Area 3 connects a cul-de-sac to the ravine. A full range of physical, social, creative and quiet retreat spaces are provided by a large climber with climbing rope, monkey bars and tube slide, a playhouse with steps, slide and storage area below, two benches, sandbox, rocky slope and retreat.

The evaluation of Play Area 3 pointed out an effective use of existing trees to separate the social area of the benches from the very active climber. Similarly the pathway and bollards are used to divide the preschool sandbox area from the other areas dominated by older children. The path also works effectively to connect a series of social places: benches, recreation centre porch, entry to playhouse, and rocks at the edge of the ravine.

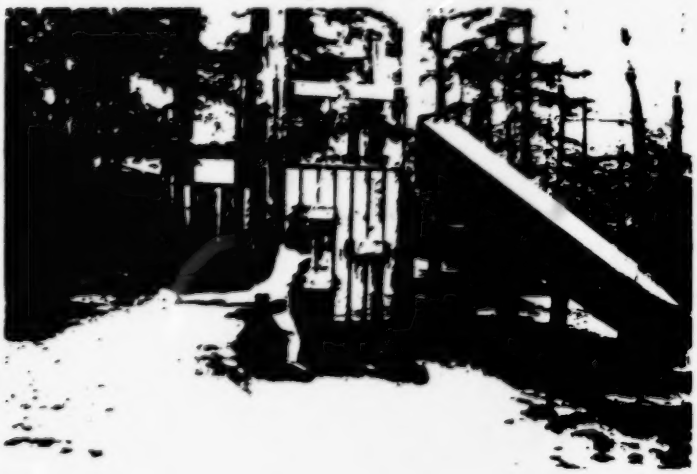
Path carries through Play Area

Within a fairly small area a great variety of activities is accommodated by making each side of the two play



Play structure is the main attraction - at times a crowd of kids of different ages - some socializing, some climbing

The "tarzan swing" is used for climbing and swinging



structures offer different activities. The large climbing structure integrates a slide, climbing frame, monkey bars, and climbing rope. These are each on different sides, but connected by the platforms. Adequate space around the structure (at least 2 m open area) is provided for jumping off and running around.

The playhouse structure can similarly support different activities on each side. The playhouse has a door and window with counter opening onto the path. The steps and slide are oriented toward the active climber, while the ravine side is intended to be more of a retreat. The fourth side has a locked storage area opening onto a grass area that

could be used for construction with hollow wood blocks (stored in the lock-up area). The platform on top is a popular look-out, a social observation place where children can view the main path and overlook the ravine.

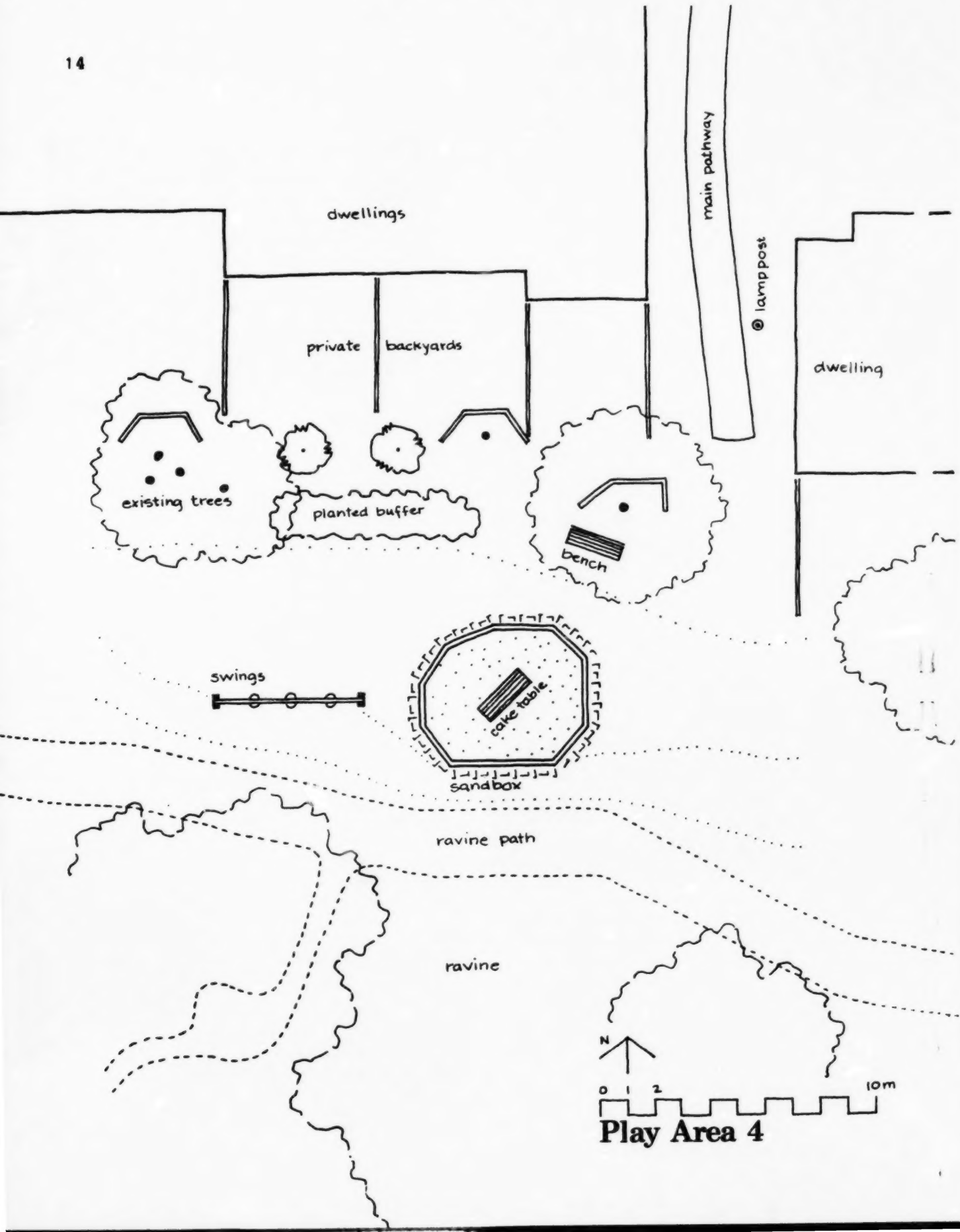
Playhouse is used as a meeting place for all ages

"Blind tag" - where participants cannot step off playhouse but can climb all over its surface

12 year old girl commenting on Play Area 3: After supper there's usually a big tag game - about 10 of us or more tear all over the 'red-slide' climber (structure with tube slide) and the little slide too (playhouse structure) - at full speed."

Based on observation of Play Area 3, there are a few suggestions for alteration. Because this has the most attractive play equipment, it is also the most popular meeting place. More attention could be given to sitting and perching places next to active play structures and at path intersections. For example, the planter edge in front of the porch (a favourite perching place) could have been a simple bench. All the planting in this area has been overrun in any case. Similarly the rocks at the edge of the ravine could have made an interesting sitting place combined with the "gateway" to the creek.

The sandbox in this area gets very little use. All the sandboxes in each play area are identical. Perhaps by combining the adjacent rocks with the sand area it could make different levels of tables, steps and seats and thus be more appealing to a wider range of uses and ages.


dwellings
main pathway
lamp post
private backyards
dwelling
existing trees
planted buffer
bench
swings
cake table
sandbox
ravine path
ravine
N
0 1 2
10m

Play Area 4

Play Area 4

This is a small local play area (144 m^2) for preschool children. It is located on an open grass slope between backyards and ravine, close to the pathway leading to the adjacent cul-de-sac street. This play space provides for creative and physical play with sandbox and infant/toddler swings. A bench is placed nearby.

The evaluation of Play Area 4 revealed that it is very seldom used, the least of all play areas. This is due to a number of factors: it is designed for preschool children only and there is a small number of preschool children living in the adjacent cul-de-sac; this play area is separated by the ravine from other play areas; it is out of view of the majority of dwellings in this cul-de-sac.

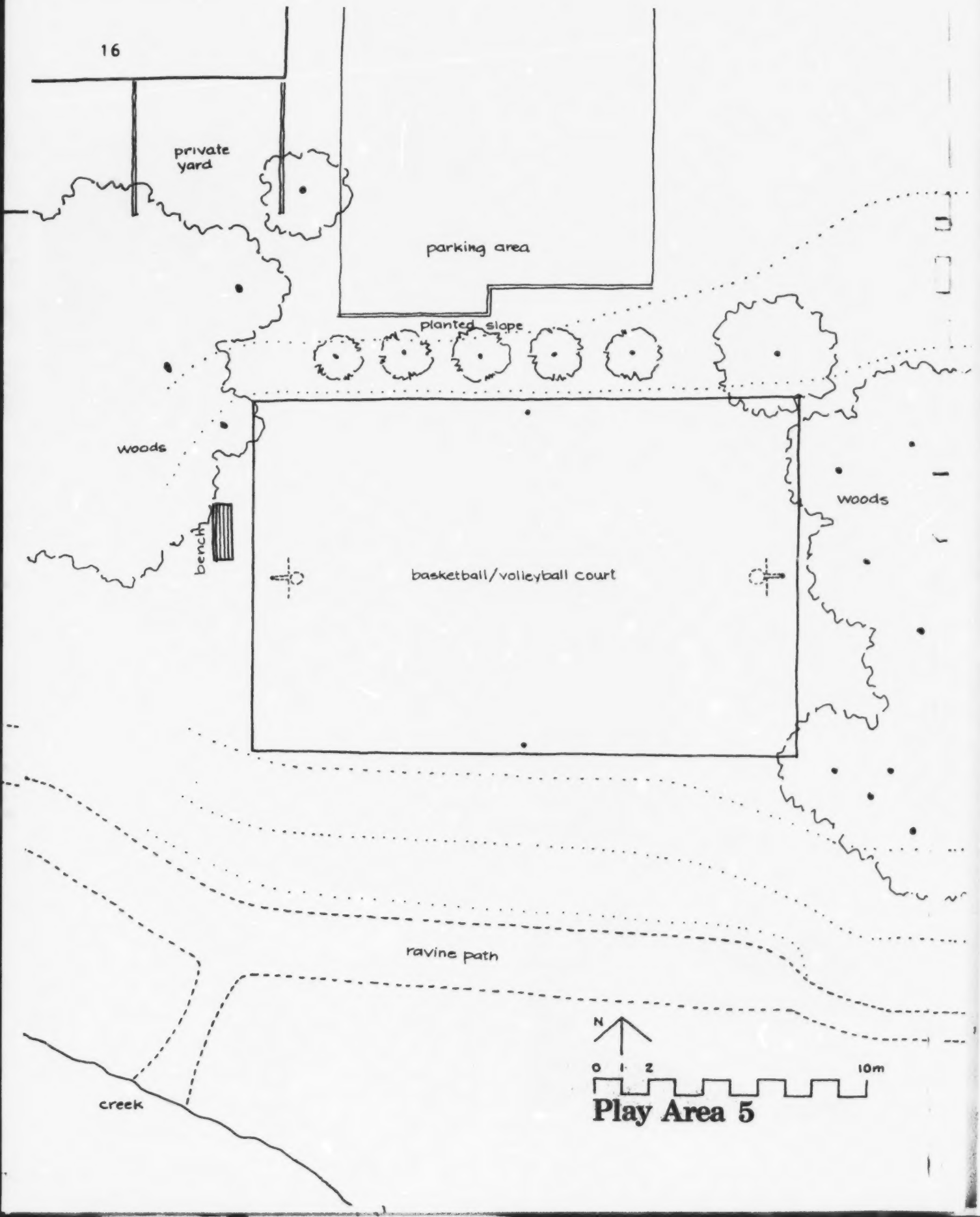
Young children sometimes stop for a 2 minute swing

Based on these observations some suggestions are offered that might make Play Area 4 a more interesting complement to other play areas. Ideally it should have been located on axis with a future bridge across the ravine so that it is a clearly visible focus from the path on the other side.

There are no other swings at Neilson Creek Co-op. A play facility that offers more to other age groups than conventional "baby swings" could make this area more attractive. Swinging actions, such as tires and ropes suspended at different heights might be integrated in one play structure.

The swings and sandbox could be located right on the path between ravine and culs-de-sac. The swings might be adjacent to the ravine while the sandbox could be closer to the street to improve casual surveillance (similar to Play Area 1).

Sand area is almost never used and yet is largest of all play areas

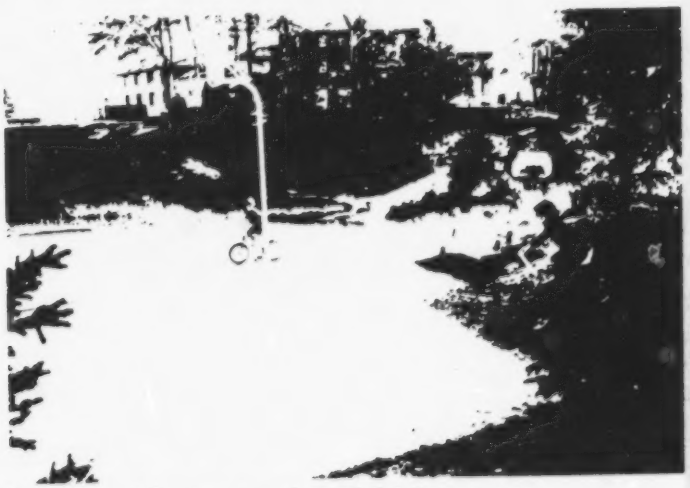

private yard
parking area
planted slope
woods
bench
basketball/volleyball court
woods
ravine path
creek
N
0 1 2
10m

Play Area 5

Play Area 5

This is a paved court for school-age and teenage play. It is located at the edge of the woods and ravine, next to the visitor parking area. It is primarily designed as a junior basketball court with posts to take volleyball nets as well. The large paved surface is also intended for ball hockey, roller skating, bike games and so on. A bench has been provided at one end of the court.

The court is crossed by foot or wheels regularly

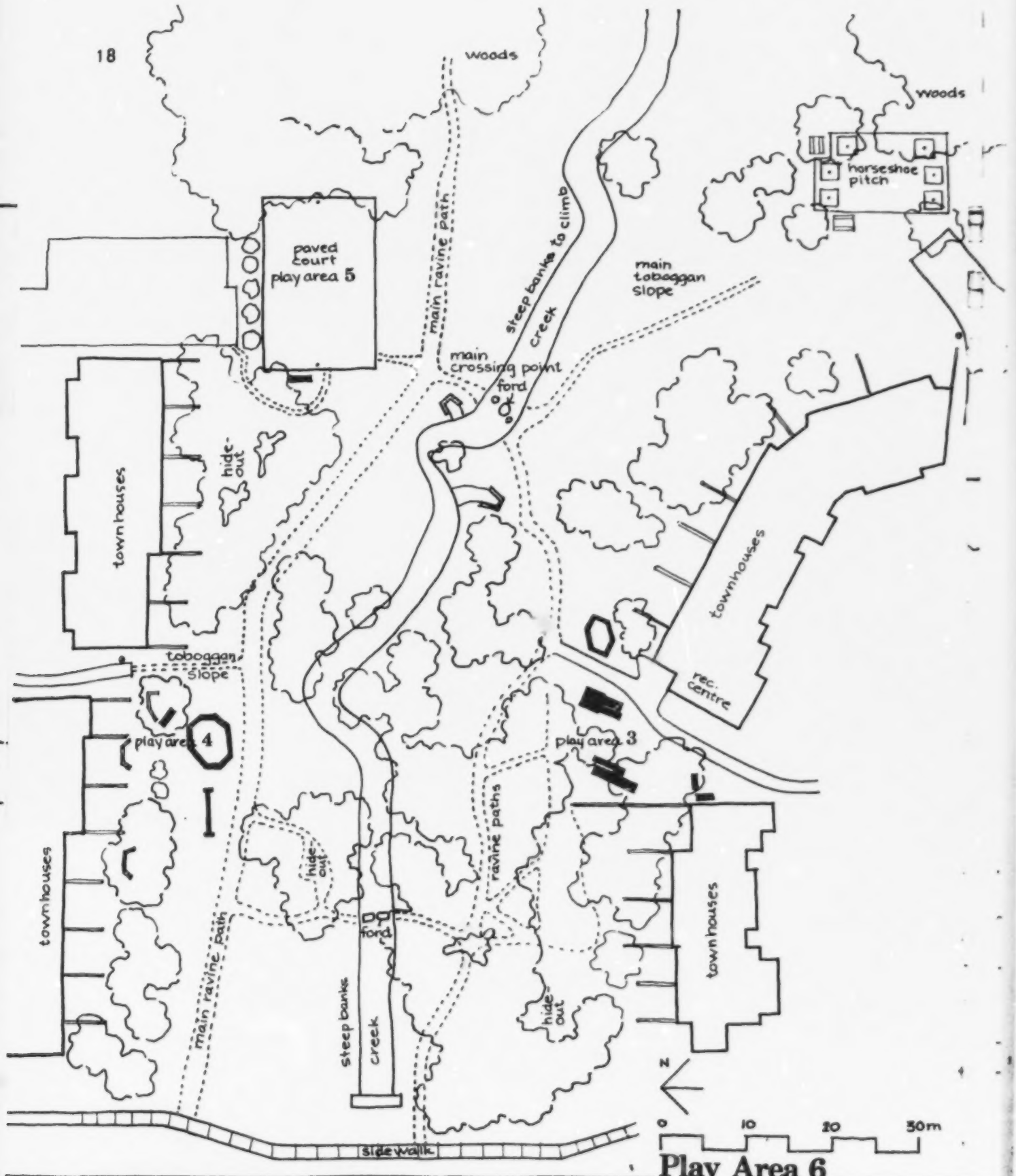


Most active use is children on bikes - using the mounds around the court as "speed ramps"

The evaluation of Play Area 5 showed that this area was not intensively used even though there was a great deal of hard surface play on parking areas and streets in Neilson Creek. This was likely because streets and parking spaces were more convenient and considered safe by residents. Also the court is not on the main pedestrian paths and is separated by the ravine from most of Neilson Creek Co-op.

Nevertheless, it seemed a useful space to teenagers who played basketball there, and to school-age children who often rode bikes on adjacent grass slopes using them as speed ramps onto the court.

15 year old boy commenting on use of basketball court, Play Area 5: "During the school year - when we're in training - a bunch of us guys will work-out there - lifting weights and doing gymnastics"


woods
woods
horseshoe pitch
paved court play area 5
main ravine path
steep banks to climb
creek
main toboggan slope
main crossing point
ford
hide-out
townhouses
townhouses
rec. centre
toboggan slope
play area 4
play area 3
ravine paths
townhouses
hide-out
ford
main ravine path
steep banks
creek
hide-out
townhouses
N
0
10
20
30m
sidewalk
Play Area 6
Manse Road

Play Area 6

This is a large natural ravine area with creek, treed and grass slopes, well used by school-age and teenage children. The area between the culs-de-sac is 5000 m^2, all in municipal ownership. The creek and ravine paths extend beyond the co-op to a larger wooded area. The main ravine path is used as a public walkway and bicycle path connecting Manse Road to the woods and a small park beyond.

Existing mature trees have been maintained on slopes to the backyards of dwellings. Only dead trees have been removed, the rest allowed to grow wild for children to use in their own terms. More than any other, this natural area contributes to the developmental activities of creative self expression and intellectual inquiry as described in CMHC's "Play Opportunities For School-Age Children."

The evaluation of the ravine noted that this was the second most active play area next to Play Area 3. Most activity was on bicycles along dirt paths, but the area was most valued by children for its secret places and the opportunity to build forts and tree houses. These were often designated as "club-houses" belonging to specific groups of children.

Based on the site observations the ravine area should continue to be maintained as naturally as possible. However, some improvement should be made to provide a stepped path down the steep slope to get better access to the creek, with larger stones to ford the creek.

Planning for Play at Neilson Creek

In this section a number of intentions have been selected that were critical to planning for play at the Neilson Creek Housing Cooperative. The intentions drawn from the experience at Neilson Creek will be of value in designing play facilities for other medium density family housing projects.

The intentions are stated below as a series of eight objectives. Under each objective there is the following discussion:

The objective is explained and related to CMHC guidelines.

The applications of these objectives are assessed at Neilson Creek.

Improvements are suggested based on the evaluation of children's activities in play areas and on the overall Neilson Creek site.

- Provide a number of small play areas with a variety of play opportunities in each
- Accommodate all ages
- Maintain and create natural areas for play
- Continuous paths to connect all play areas and dwellings
- Create large paved areas for play
- Safe design for children and cars
- Large grassed areas for play
- Design frontyards and backyards to support play
- Integrate play areas into overall landscape

Provide a Number of Small Play Areas with a Variety of Play Opportunities

Preschool children require play areas close to home within sight and hearing distance. School-age children can wander further, but most spontaneous games and socializing occur within a range of 10 m to 200 m from home.

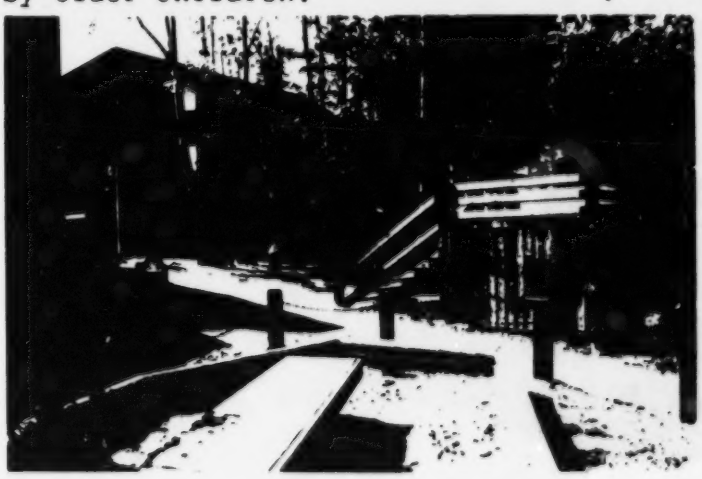
From the child's point of view play areas are basically attractive meeting places where a child looks for his or her friends. Therefore sandboxes, playhouses and climbing structures are most used as informal gathering spots if they are in scale with small group activities and close at hand along the routes that children use regularly. Each play area should be designed to support a combination of physical play, social play, creative cognitive play and quiet retreat play. This will create an enriched mix of activities to support full child development.

Within each play area quieter, social or creative activities should be buffered from active equipment such as climbers and swings. Older children's activities should be further separated from preschoolers so that they are not overrun. Playing fields and ball courts need to be set apart from other play spaces.

At Neilson Creek

In the Neilson Creek Housing Co-op there are four playgrounds, one basketball court, and the ravine area, all designated as separate play areas. Play Areas 1 to 4 are dispersed, one to each cul-de-sac, each kept relatively small (ranging from 110 m^2 to 360 m^2). Play Area 1 has become the gathering place for preschool children to play, and Play Area 3 the meeting place for school-age children. Areas 2 and 4 are less frequented even though they have some unique qualities. Play Areas 1, 2, 3 and 6 are ideally organized as a set of play spaces along the main pathway; 4 and 5 are more isolated, because of the creek.

Play Area 3 the pathway and bollards are used to divide the preschool sandbox area from the other areas dominated by older children.



To make the play areas equally attractive, Area 4 should have more interesting swinging activity for school-age children. Sand pits are too similar in all play areas and could have more variety in character.

The rocks next to sand area used as a table for clay

An excellent combination of activities is provided in Play Areas 1, 2, and 3 with care taken to adequately separate active and quiet activities.

Play Area 4 seems too limited with just a swing and sandbox. All of these four play areas suffer from inadequately defined "quiet retreat" spaces. The line of rocks used to encircle retreats are not high enough to create a sense of enclosure.

Area 5, the basketball court, is understandably more specialized. Area 6, the ravine and creek, has its own natural variety of areas that support different kinds of activity in the richest possible way.

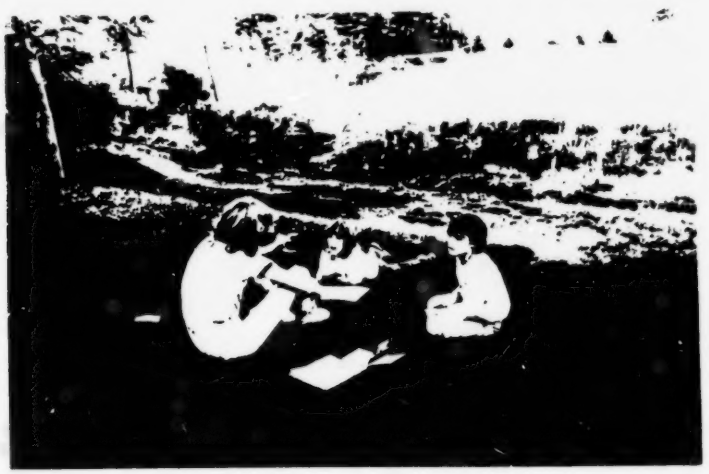
Table 1 summarizes the wide range of children's activities observed at Neilson Creek. The locations in Table 1 demonstrate that the activities are not limited to designated play areas, but occur throughout the whole site. Although the play areas were the most popular location they only accounted for about 30% of all activity observed.

Play Area 2

Play Area 1

TABLE 1:
PLAY ACTIVITIES AND TYPICAL LOCATIONS
BASED ON OBSERVATIONS AT NEILSON CREEK HOUSING COOPERATIVE

PLAY ACTIVITIES		PLAY LOCATIONS: Recr. Centre	Paths/Sidewalks	Roads	Parking Lots	Front Porch	Private Driveway	Backyard	Back Common Area	Paved Courts	Mounds and Hills	Climbing Structures	Play House	Sandbox	Benches/Picnic Tables	Fields/Open Grass Areas	Wooded Areas/Creek
Physical	Bike Riding		•	•	•					•	•					•	
	Running/Tag		•	•	•					•	•					•	
	Rough & Tumble Play				•			•	•		•	•	•				
	Climbing/Swinging	•						•				•	•	•			
	Small Group Games				•												
	Team Games/Sports				•											•	
	Skateboard/Roller skating			•	•					•							
	Ice skating																
	Sliding on Ice and Snow										•	•	•				
	Metal Slide/Tube slides																
Creative Cognitive	Digging/Sand Play							•						•			
	Water Play							•									
	Construction	•												•			
	Arts & Crafts					•											
Social	Table Games		•												•		
	Sitting and Chatting		•												•		
	Walking together		•														
	Role playing																
	Quiet Retreat																



Accommodate All Ages

Where a number of play areas are provided, some should appeal to young and others to older children. They should not however, be so specialized that they appeal to only one age group. For example some play areas can be made appealing to both preschool and young school-age, and others to school-age and young teenagers.

The intention is to avoid young children being bullied or "run over" by the activities of older children, and to provide identifiable meetings places for each age group.

Teenage Children

Teenagers need guaranteed places they can call their own, to "hang out" in and to socialize among their own peers without adult interference. These places can be indoor spaces used at certain scheduled times - a meeting room in a recreation building, for example.

Teens like activities requiring skill, such as basketball, horseshoe pitching, ping-pong and miniature golf. Some also enjoy places to "work-out" doing calisthenics, jogging and so on.

At Neilson Creek

In Neilson Creek teenagers sometimes use the basketball court or climb around in the ravine, but they lack credible social meeting places. Partly, this results from adults discouraging teens from attempts to establish any social places. However, there was no teenage social corner designated in the planning process - a perching place, not in direct view of dwellings but at an intersection in the project where they could see friends coming and going.

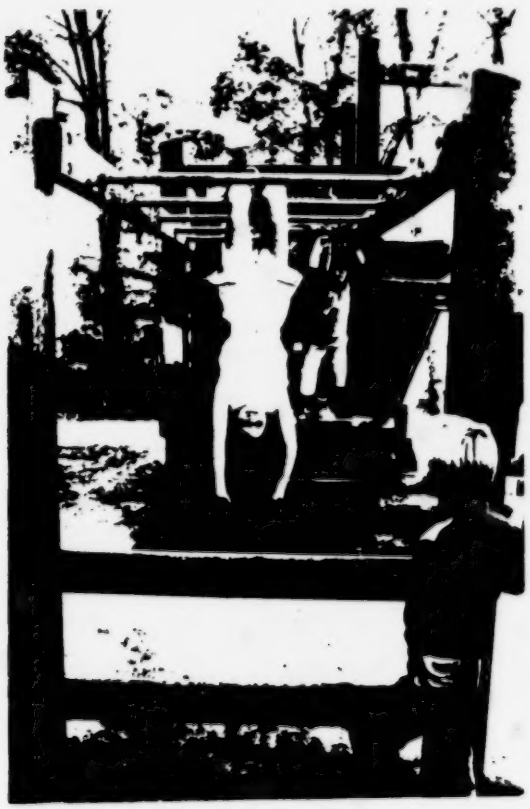
Teens:

"We've been kicked out of more places by adults .. First they took away the picnic table where we used to sit (in Play Area 3) ...then they kicked us off the island (in the middle of the cul-de-sac in front of the Recreation Centre) ...at first they let us use the upstairs meeting room in the Rec. Centre - we used to sit around and talk and get together when the weather was bad - but they soon kicked us out of there too ....we stopped trying to meet here and started hanging around, further away, at the donut shop and other places."

School-age Children

CMHC's publication "Play Opportunities For School-Age Children" provides complete details for activities and design of play areas. Generally school-age children are often noisy and active. They need play areas at a distance from backyards of dwellings (which should be preserved as a quieter side).

They tend to use the whole housing site and the local neighbourhood for play. School-age children enjoy the excitement of movement on skateboards, roller skates and bicycles. Any slopes with paths are attractive.



Climbers, slides and swings need to be challenging, and allow a variety of physical skills to be tried. Paved areas, close at hand, are demanded for spontaneous "street games" such as ball hockey, while open grassed areas are preferred for other informal team games.

At Neilson Creek

In Neilson Creek, school-age children have an ideal setting to grow in. They have free range of the whole site and wooded areas beyond. The ravine, creek and wooded areas are a wonderfully unstructured playground for acting out fantasies. They are most often on bikes, riding around on ravine paths, sidewalks and roadways, "checking out the area" for activity or just "cruising".

The central Play Area 3 acts as a meeting place for school-age children. From there they head off into the ravine or along other routes, often looping back to Play Area 3 as a "base camp".

Because streets and parking areas are short dead-end routes they are used intensively for street games with relative safety. There are also ample small fields dispersed along the eastern edge of the site, but these are used much less than paved areas.

Preschool Children

Generally, preschool children require contact with parents and therefore need to have play areas close to home, within view and calling distance, for a sense of security for both children and adults. Ideally preschool play areas should be accessible from family dwellings without children having to cross roads or parking areas. CMHC's publication "Play Spaces for Preschoolers" describes additional activities to be accommodated and design details for play areas.

At Neilson Creek

Although there is a preschool play area within 50 m of each dwelling in Neilson Creek, Play Area 1 has become the preschool meeting place. The sandbox here is much more active than any other, even though the population of young children is evenly spread among the 3 culs-de-sac south of the ravine. Most parents seemed to feel that by 4 years old their children could cross these quiet streets without danger.

Preschoolers on tricyles were often seen using streets, parking areas and pathways as part of a loop route. However, during the time that cars were going to or returning from work parents would direct preschoolers to play in back yard areas. Benches adjacent to preschool play areas were never used by adults for supervision during site observation times.

Maintain and Create Natural Areas for Play

Natural areas including wooded areas, creeks and water courses can be provided for explorative and fantasy play as rich environments where school-age and teenage children can depend on their own resources to initiate creative and intellectual activity. These natural areas should be allowed to grow wild to support animal and bird habitats for children to observe.

Younger children play in creek at crossing point

In developing new natural landscapes, groves of mature trees should be saved where possible. "Native Plant Communities" could be planted including indigenous bushes and wild flowers to create a maintenance free overgrown area. Naturally wooded areas can be cultivated or preserved in both small pockets or larger extensive tracts.

In CMHC's "Play Opportunites For School-Age Children" there is a further discussion of strategies for natural areas under the chapter on "Design Details".

At Neilson Creek

This housing project is fortunately endowed with an adjacent ravine and wooded area in municipal ownership. This has guaranteed an untamed landscape for children's explorative play and treehouse construction. Residents have decided against building play structures in the ravine.

Older children value the wooded areas for the independent play opportunities it offers, out of the direct overview of adults. Parents

A major tree house construction project

Splashing bikes through mud puddles along path through woods

expressed some fears for the safety of young school-age children. There was some security gained in the awareness that a few adjacent houses maintained regular surveillance over the ravine and woods, watching for signs of deviant behaviour and fire.

Children had made their own intricate network of paths and clearings in the ravine and fords across the creek. They knew every animal burrow and could describe subtle ecological changes through the seasons. They could tell stories of the history of every found object, fort and treehouse. This was truly a rich playground.

7 year old boy commenting on the woods in the winter: The paths are made by footprints in the snow and there are animal prints you can follow."

8 year old boy: "The playgrounds are for little kids - I like to ride my 'dirt bike' on these trails (in the ravine), build forts and dam up the creek."

15 year old proudly pointing to ravine paths: "We made these paths - they weren't here before."

Continuous Paths to Connect All Play Areas and Dwellings

Sidewalks, pedestrian paths or pedestrian streets should create a continuous network that gives direct access from dwellings to play areas and links all the play areas together.

The main pathway should be the most active walkway and should pass next to or right through all play areas. Play areas that are out of the way or off the main path will tend not to be used. Safe routes to school and community facilities should connect to the main pathway of the housing development. Auto routes should be discontinuous, so that pedestrian ways can be as direct and continuous as possible.

CMHC's research report 16, "La Securite des Enfants vs La Circulation-Auto" further describes strategies to ensure safe pedestrian routes in conjunction with service and parking access.

At Neilson Creek

Neilson Creek Housing Cooperative was designed as four sub-communities, each organized on a short cul-de-sac. The four culs-de-sac are connected by a main pathway at the midpoint of the streets. The four main play areas and the ravine are all along this pathway, so that children regularly cross the street to get from one play space to another. As well, there is a

sidewalk along Manse Road.

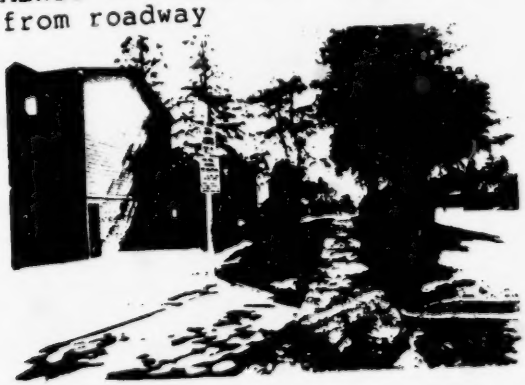
There are good choices provided for different ages between pathways, sidewalks and culs-de-sac, but children use them all as part of a linked network of bicycle and play routes. Parents do not discourage this use of roads and parking areas, often using the streets as social gathering places themselves. Although motorists move very cautiously, there are real dangers for preschoolers on tricycles who are often not visible behind cars.

The intersections of the pathway and culs-de-sac are favourite gathering spots, but since there are no sidewalks along culs-de-sac, activity spills out onto the roadway. Expanding the width of the pathway at intersections (and at play areas as well) would offer more options for safe hard surface play for younger children.

The main pathway links all the play areas together.

The pathway is well used by all ages for social activity

Manse Rd. Sidewalk separated from roadway



Create Large Paved Areas for Play

School-age and teenage children seek out larger paved spaces to play "street" and court games such as ball hockey, skipping, kickball, hopscotch, skateboarding, basketball, wall-tennis, go-carting, and bicycling. They do not usually seek out proper sports facilities in a schoolyard or park because their games tend to be spontaneous, with just a few local friends close to home.

If such paved areas do not exist close at hand, they will use the street or parking lot. "Play Opportunities For School-Age Children" recommends a paved area of 150 m^2, conveniently located, but separated sufficiently from dwellings to avoid a noise nuisance.

At Neilson Creek

In Neilson Creek, a 13 m x 20 m basketball court was created as a multi-use hard surface play area. Although periodically used by teens for shooting baskets, it is seldom used for daily "street games" because it is off the path and because the short dead-end streets and small parking areas are perceived to be relatively safe.

The streets and visitor parking places are actively used for small, informal biking, roller skating and ball playing games. When even a larger ball hockey game was organized it always occurred

in an empty visitor parking area at the end of the culs-de-sac, before the cars arrived at the end of the working day. The parking areas were about the same size as the basketball court but had the additional feature of curbs, which the children found a useful edge to bounce balls off.

4 teenage girls use court as roller skating "dance floor"

Safe Design for Children and Cars

Ideally one should strive for segregation of cars and children's activities, but as is evident in the experience of Neilson Creek, children's play often crosses or extends onto local streets and parking areas.

This section discusses strategies and problems at Neilson Creek, that could be applied to the safe design of streets and driveways of medium density housing projects. Further details and illustrations are offered by CMHC Research report 16, "La Securite Des Enfants vs la Circulation-Auto".

1. Reducing traffic volume and speed on local residential streets.

At Neilson Creek the basic approach to limiting volume was to create short dead-end streets with only 25 dwellings on each. There are signs at the entry to these streets which warn of children at play. Other strategies might include speed bumps, vibration strips and the narrowing of the road width at the entry to a local street. Garbage storage in Neilson Creek has been located next to Manse Road so that garbage trucks do not have to use culs-de-sac. Neilson Creek residents consider the culs-de-sac as a children's precinct and motorists are very conscientious about safe driving.

Signs posted at the entry to each cul-de-sac warn of children playing
note - no sidewalks

2. Providing sidewalks along all roadways.

At Neilson Creek, the main traffic artery, Manse Road, has a sidewalk set back from the curb with a wide grass verge separating them. This creates a safe bicycle and walking route for children on their way to school, parks and local shops.

Unfortunately the culs-de-sac at Neilson Creek have no sidewalks or curbs at all. This creates a situation where young children have no way to differentiate safe vs dangerous zones in their front yard play. Even preschool children are forced to walk along the road to visit friends on their own street. Painted walkway zones along the edge of roads can be an economical alternative, but are a poor substitute for sidewalks with curbs.

3. Walkways safely crossing roadways and driveways.

At Neilson Creek the main pedestrian path crosses all culs-de-sac. The designers have taken care to ensure that the pathway is not screened by planting or fences, so that children and drivers can see each other approaching the intersection of path and road.

Additional warning devices might be considered on busier streets than occur at Neilson Creek: colour and texture on the road surface as well as on the path to warn both motorists and cyclists; low stop signs for children; and changing the path gradient to a rising slope toward the street.

On housing sites where sidewalks cross in front of ramps to parking garages a similar problem of visibility occurs.

In Neilson Creek as in many economic townhouse projects, private driveways are very short and make it difficult for drivers to see preschoolers playing or walking behind cars. This situation can only be handled by safe driving practices. For example, drivers could back into driveways, having driven by first to observe the location of any children. Then, when leaving, they have a clearer view of any small child in front of the car. At Neilson Creek there have been a few near mishaps when drivers have backed out without checking behind their vehicle.

The baseball team (adult) gathers, after a game. Kids join in too

Parent defended children's play in culs-de-sac: "Why should we have to chase kids off to the schoolyard when the culs-de-sac are safe places to play... with some supervision by parents."

The traffic islands are popular as bike loops and as meeting places for all ages

Small baseball game on grass field

Bicycle stunts on improvised ramp at end of cul-de-sac

Large Grassed Areas For Play

Although paved areas seem preferred by children for most activities, open grass areas provide a softer running and tumbling surface for soccer, play-fights, tag, kite flying and so on. CMHC guidelines suggest that for a variety of ball games, a 250 m^2 area should be clear of planting and relatively flat, but well drained. 150 m^2 would be minimum, with a 10 m buffer between outdoor private spaces and ball playing areas.

At Neilson Creek

In Neilson Creek there are four open grass areas between the wooded conservation land and the dwellings, ranging in size from 15 m x 15 m to 15 m x 30 m. Initially there was no separation between backyards and playing fields, but subsequently the co-op enclosed yards with high wood fences to stop balls and increase privacy. Another alternative buffer could be perimeter mounds planted with trees and bushes, which also provides a shady place to sit and watch games. Mounds or fencing may also be required to keep balls off streets and parking lots.

Neilson Creek residents have taken care to use a specific place for dog excrement to keep grass fields usable for play.

Design Frontyards and Backyards to Support Play

Children of all ages, spend much of their time playing in frontyard and backyard areas. At Neilson Creek, front and backyard locations accounted for 24% of play activity observed (20% in front and 4% in back), compared with 20% in playground spaces. CMHC research report 9 "Out of the Cellar Into the Parlour" describes further details, beyond those noted here, for design of front and backyard spaces for raising children.

Front porches and frontyards are places, "between home and neighbourhood," allowing the security of close contact with home and parents at the same time as social contact with friends and street activities. Thus the front yard can be an ideal "doorstep" play space for supervising preschoolers, especially if it can be contained with a low fence or hedge to keep children in and the creative mess of play partially screened.

Backyards and terraces are private places for family outdoor living where children can dig, plant, keep pets, and construct their own play huts. In medium densities, yards are typically small so it is important that they are fenced for family privacy with 2 m high fences and made as deep as possible. The fence at the back of the yard could be lower (1 m to 1.2 m high) so that the yard does not feel too closed in. There should also be a gate in the fence so that there is parent and child contact with back common areas.

At Neilson Creek

In Neilson Creek frontyards offer very little support. Front porches are too small to provide a sheltered play or gathering space, so that almost all activity takes place on the driveway. Porches should be at least big enough for three or four children to gather and play, with some roof shelter and sense of enclosure.

Porches are too small - play spreads onto other hard surface areas

This would create an identifiable doorstep play space, as a transitional space between indoors and outdoors, especially important for toddlers. As well, a few steps up to a porch make for interesting play on different levels and a natural gathering place for older children who love to sit on steps.

Front areas are very active with family activities

Initially, there was no space close to home that parents could keep preschoolers within bounds, to gain that sense of confidence of having them within limits. Porches, driveways and front lawns were all level with no edges, and backyards had no rear fences. More recently, the Co-op has installed fences with gates to enclose backyards.

Backyard construction - children building playhouse with loose boards, nails and hammer

Integrate Play Areas into Overall Landscape

Because most play areas need to be physically integrated into the housing landscape, they should be attractive as landscaped areas. Play areas should be relatively small and capable of being tucked into clusters of trees, which creates a positive mixture of sun and shade for play activities in different seasons. Attractive fencing, mounds and evergreen planting can screen and buffer active play from private dwelling spaces and increase the visual interest in the landscape, and if used cleverly, contribute to play as well.

At Neilson Creek

The small size and spacing of Play Areas in Neilson Creek has ensured their low key visual impact on the housing environment. Existing mature trees have been retained in play areas and Area 3 is

remarkable for its mix of large trees and play structures. Where new trees were planted, a large caliper was chosen and planted just to the side of active play areas so that trees were not broken accidentally. Linden was chosen, a fast-growing hardy specimen, that creates good shade and broad cover.

Where bushes were not planted in the middle of routes that children used as short cuts, they have survived well. Designers should have predicted such natural routes and left them unplanted. Where a "wall of green" was desired to divide or enclose a space, it could have been planted in conjunction with a low fence or retaining wall. A low lattice or picket fence could eventually be overgrown by the bushes as they fill out, but in the early stages, protect the young plants.

All play structures were simple forms, made of wood timbers and stained in dark natural colours to blend with the landscape. Wood was also chosen because it is durable, simple to maintain and more pleasant to touch in cold weather.

Summary

Demonstration Project.

The intention of the CMHC demonstration project at the Neilson Creek Housing Cooperative in Metropolitan Toronto was to show how the addition of a few well designed play areas improves the quality of family life in a medium density housing project. The play areas offer a wide variety of play opportunities as set out in CMHC advisory documents. They incorporate the particular needs of each age group: preschoolers, school-age children and teenagers, plus needs of parents concerned with the safety and full development of their children.

Participation in Planning

A recreation committee, including future residents - both adults and children - worked with CMHC, the developer, landscape architect and play equipment manufacturers to design all of the play areas. Play spaces were sited to best use natural land forms and save existing trees. The ravine with its wooded slopes and creek was incorporated as a challenging play area for independent exploration. Play structues were selected for their challenging and imaginative play value. Small play spaces were established close to each cluster of town houses for easy parental supervision. A major play area for older children was set up next to the recreation centre and a hard-surface play court removed from dwellings for active noisy play. Continuing resident involvement has ensured that play areas are well maintained. Recreation programs are actively run, not only for children, but for adults too. A horseshoe pitch was built by residents at the edge of the property and summer and winter sports are organized on and off site.

Positive Benefits

Participation of children in selecting play facilities, the decision making of parents in setting planning priorities, the preservation of natural landscapes, and the plentiful provision of high quality play areas have all contributed to a strong sense of community pride and responsibility. Children feel satisfied playing close to home with a great freedom of choice within close range. There have been no child-vehicle accidents and parents feel the paths and streets of their housing co-op are safe and well watched over. There has been no evidence of vandalism. Instead, all signs point to respecting each other's individual property and keeping well maintained shared play and landscape areas. With this small investment in a stimulating environment for child care, the Neilson Creek demonstration project offers a promise of a stable community that has attracted families who care about their children's needs as they grow.

CMHC Resources

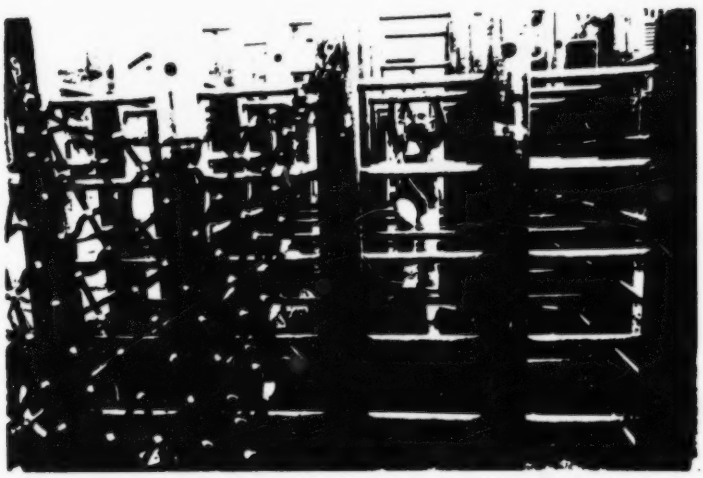
"Play Spaces for Preschoolers." Ottawa: CMHC, 1978.

"Play Opportunities for School-Age Children." Ottawa: CMHC, 1979.

Creative Playground Information Kit 1. Ottawa: CMHC, 1977.

Johnson, L.C, & Shack, J. "Out of the Cellar and Into the Parlour - Guidelines for Adapting Residential Space for Preschool Children," Research Report 9. Ottawa: CMHC, 1980.

Latreille, Parent, "La Securite des Enfant vs la Circulation-Auto," Research report 16. Ottawa: CMHC, 1980.



POOR

QUALITY

ORIGINAL